

Title (en)  
ENERGY CONVERSION DEVICE USING CHANGE OF CONTACT AREA AND CONTACT ANGLE OF LIQUID

Title (de)  
ENERGIEUMWANDLUNGSVORRICHTUNG MIT ÄNDERUNG DER KONTAKTFLÄCHE UND DES KONTAKTWINKELS VON FLÜSSIGKEIT

Title (fr)  
DISPOSITIF DE CONVERSION D'ÉNERGIE À L'AIDE D'UNE VARIATION DE ZONE DE CONTACT ET D'ANGLE DE CONTACT D'UN LIQUIDE

Publication  
**EP 2838191 A4 20160113 (EN)**

Application  
**EP 13850118 A 20131030**

Priority  
• KR 20120121909 A 20121031  
• KR 2013009735 W 20131030

Abstract (en)  
[origin: EP2838191A1] The present invention relates to a method and a device for converting energy using a change of a contact area and a contact angle of liquid and, more specifically, to a method and a device for converting mechanical energy into electric energy by applying a reciprocal phenomenon of electrowetting, wherein liquid and gas are positioned between two facing substrates and energy is converted by using a volume change of a fluid, such that the present invention has the advantages of preventing channel-blocking without requiring all facing electrodes to be patterned, simplifying a device configuration, implementing easy control, and removing the need to apply an external power source.

IPC 8 full level  
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CPC (source: EP KR US)  
**H02N 1/08** (2013.01 - EP US); **H02N 3/00** (2013.01 - KR); **H02N 11/002** (2013.01 - US)

Citation (search report)  
• [A] US 2012181901 A1 20120719 - KRUPENKIN THOMAS NIKITA [US], et al  
• [XAI] TOM KRUPENKIN ET AL: "Reverse electrowetting as a new approach to high-power energy harvesting", NATURE COMMUNICATIONS, vol. 2, 23 August 2011 (2011-08-23), United Kingdom, pages 448, XP055232099, ISSN: 2041-1723, DOI: 10.1038/ncomms1454  
• See references of WO 2014069894A1

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